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CASE REPORT

Luxatio Erecta – "Hands-up" shoulder dislocation

Luxatio erecta – Luxation « en mât » de l'épaule

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Introduction: Inferior shoulder dislocation, also known as luxatio erecta or "hands up dislocation", is a rare and unusual type of shoulder dislocation. It is more commonly associated with neurovascular damage than other types of shoulder dislocation.
Case report: We describe a case of a 44 year-old male who presented to our emergency centre with an inferior shoulder dislocation. X-ray of his left shoulder was performed which revealed the classical appearance. The injury was subsequently relocated by closed reduction technique.
Conclusion: The typical mechanism of injury is a sudden application of pressure from above onto an abducted and externally rotated shoulder joint with the elbow flexed. To reduce, first traction–counter traction is applied in line with the abducted humerus followed by steady adduction of the arm.

Introduction: La luxation inférieure de l'épaule, également connue sous le nom de luxatio erecta ou luxation en mât de l'épaule, est un type de luxation de l'épaule rare et inhabituel. Elle est plus souvent associée à des dommages neurovasculaires que les autres types de luxation de l'épaule.
Etude de cas: Nous décrivons le cas d'un homme de 44 ans qui s'est présenté dans notre service d'urgence avec une luxation inférieure de l'épaule. Une radiographie de son épaule gauche a été réalisée, révélant l'apparence habituelle de la blessure. La luxation a été remise en place en utilisant une réduction fermée.
Conclusion: Le mécanisme de blessure habituel est l'application subite d'une pression depuis le haut sur une articulation de l'épaule en abduction et en rotation externe, coude plié. Pour procéder à la réduction, une traction – contre-traction est appliquée, en alignement avec l'humérus en abduction, cette manipulation étant suivie d'une adduction ferme du bras.

African relevance

- Many Africans are at risk of this injury as they carry heavy weights on their heads.
- It is uncommon so is likely to cause confusion if encountered.
- An X-ray should be performed prior to reduction even if resources are limited.
- May require long transfers to a specialist centre if operative management is required.
- Risk of long-term complications if indications for operative management are not recognised.

Introduction

Inferior shoulder dislocation, also known as luxatio erecta or "hands up dislocation", is very unusual and accounts for only 0.5% of all shoulder dislocations.[1] Consequently when it does present there is often confusion and uncertainty regarding the diagnosis. However, of all types of shoulder dislocation, it has the largest incidence of neurovascular compromise.[2] We present a case of inferior dislocation of the shoulder joint with a discussion of the management and potential associated complications.

Case report

A 44 year-old gentleman presented to our emergency centre having sustained an injury to his left shoulder. He and two of his co-workers were carrying a large timber beam on their shoulders. He was supporting one end of the beam with his left arm. As a result his left shoulder was abducted more than 90° and externally rotated. His elbow was also flexed. His work colleague, who was supporting the midsection of the beam, slipped and fell resulting in sudden and severe downward pressure onto his left shoulder. He was unable to support the beam after this. On presentation to the emergency centre he was supporting his left arm above his head with his right arm (Fig. 1). No evidence of neurovascular compromise was noted. X-ray of his left shoulder was performed which revealed the classical appearance of an inferior dislocation (Fig. 2). Following reduction he was discharged home with an appointment for follow up in the fracture clinic.

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Figure 1 Photograph of author demonstrating the typical posture in inferior dislocation of the shoulder joint.

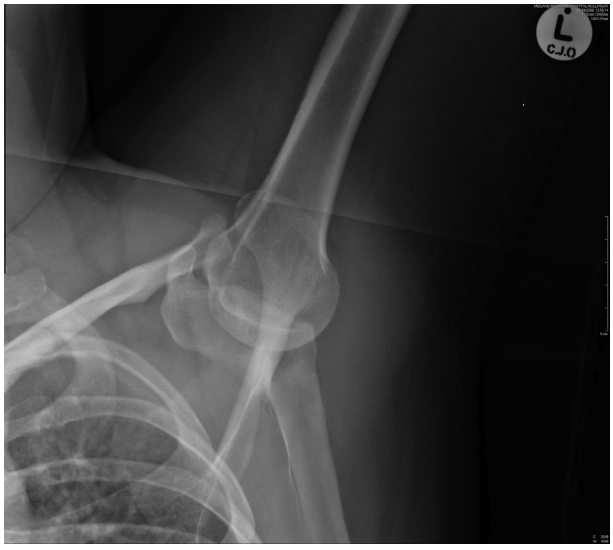

Figure 2 Left shoulder X-ray revealing inferior dislocation. The humeral head is positioned below the glenoid fossa and the shaft of the humerus is parallel to the spine of the scapula.

Discussion

Inferior shoulder dislocation, luxatio erecta, was first described in 1859 by Middeldorpf and Scharm.[3] The typical mechanism of injury, as in our patient, is a sudden application of pressure from above onto an abducted and externally rotated shoulder joint with the elbow flexed. Alternatively it can occur as a result of a violent abduction force on the shoulder.[4] The pathognomonic clinical finding is that the patient is seen supporting the injured shoulder in abduction and external rotation with the elbow in flexion and the forearm behind the head.[1] The patient will not be able to lower their arm, hence the name ''hands up dislocation''.

The vast majority can be successfully managed with closed reduction, once the diagnosis has been confirmed on X-ray. To reduce, first traction–counter traction is applied in line with the abducted humerus followed by steady adduction of the arm. When the dislocation has been reduced the joint should be x-rayed once again to confirm reduction and determine if any previously occult bony injury becomes apparent. Occasionally the humeral head can ''button-hole'' through a defect in the inferior portion of the shoulder joint capsule requiring operative treatment.[5] Other indications for operative management include the presence of vascular compromise, or at a later stage if injury to the glenoid labrum or rotator cuff injury has occurred.

Recognised complications include rotator cuff tears, seen in 12% of patients,[5] injuries to the axillary nerve, axillary artery, or fracture of the humerus and scapula, including injury to the glenoid labrum. Fractures of the acromion, clavicle, inferior glenoid fossa and greater tuberosity often require surgical intervention.[6] Mallon et al. reported that neurological injury, usually patchy sensory deficit over the lateral aspect of the upper arm, occurs in up to 60% of cases.[5] This usually resolves after reduction. However it is imperative that a diligent examination for signs of brachial plexus injury, which can result in significant morbidity, be conducted.[7]

Authors' contribution

Richard Lynch treated the patient, wrote and edited the manuscript. Yvonne McCague gathered the data and assisted in writing and editing the manuscript. Michelle Barlow proof read and edited the manuscript and images.

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Conflict of interest

The authors declare no conflict of interest.

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